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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.    | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------|------------------|
| 10/500,507   | 06/29/2004  | Peter Lurkens        | DE 020010              | 4384             |
| 24737  | 7590        | 02/13/2006           | EXAMINER<br>VY, HUNG T |                  |
| PHILIPS INTELLECTUAL PROPERTY & STANDARDS<br>P.O. BOX 3001<br>BRIARCLIFF MANOR, NY 10510 |             |                      | ART UNIT<br>2821       | PAPER NUMBER     |

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/500,507

Applicant(s)

LURKENS, PETER

Examiner

Hung T. Vy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/07/2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/26/04 & 6/29/04

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This is a response to the Applicant's amendment submitted on 01/23/2005. In virtue of this amendment, claims 1- 14 are now pending in this applicant. Upon reconsideration, the rejection of claim 12 by Nilssen mail 12/07/2005 is hereby withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Nilssen and Jungreis et al. in the record of prior art as U.S. 4,949,015 and U.S. 6,535,403.

### Claim Rejections - 35 U.S.C. § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, and 8-14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nilssen (U.S. pat. 4,949,015) in view of Jungreis et al. (U.S. Patent No. 6,535,403).

With respect to claim 12, Nilssen discloses in electronic circuit for operating a high-pressure lamp in at least two modes, a first half bridge (Qa1,Qa2) and a second bridge (Q1b,Qb2) connected in parallel and the improvement comprising: second means for operating the first half bridge, whereby the first half bridge and the second half bridge operate independently of each other (See column 4, line 61-68), but Nilssen does not disclose a filter coupled to the output of the first haft bridge circuit, a resonant circuit coupled to the output of the second haft bridge circuit. However, Jungreis et al. discloses a filter ( $L_1C_1$ ) coupled to the output of first haft bridge circuit (( $Q_1Q_2$ ) and a

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resonant circuit ( $L_2$ ) coupled to the output of a second half bridge circuit ( $Q_3Q_4$ ). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electronic circuit of Nilssen by arranging the filter and resonant coupled to the first and second half bridge in order to generate a pulse width modulation output voltage having a distorted output voltage waveform and compensate for the distorted output voltage waveform response to the ripple current since such an arrangement of the filter and resonant circuit for the state purpose has been well known in the art as evidenced by the teaching of Jungreis et al. (see column 1, line 65-68 and column 2, line 1-5).

With respect to claims 1, 8-9 and 12-14, Nilssen discloses all limitations recited in claim 12 except for the first filter includes a first coil coupled to the output of the first half bridge and the resonant circuit includes a second coil coupled to the output of the second half bridge characterized by a first capacitor coupled between the first coil and either the reference potential (-) or the operating potential (+) and second capacitor coupled between the second coil and either the reference potential (-) or the operating potential (+) or in parallel to the high pressure lamp. However, Jungreis et al. discloses the first filter includes a first coil ( $L_1$ ) coupled to the output of the first half bridge ( $Q_1$ ,  $Q_2$ ) and the resonant circuit includes a second coil ( $L_2$ ) coupled to the output of the second half bridge ( $Q_3, Q_4$ ) characterized by a first capacitor ( $C_1$ ) coupled between the first coil ( $L_1$ ) and either the reference potential (-) or the operating potential (+) and second capacitor ( $C_2$ ) coupled between the second coil ( $L_2$ ) and either the reference potential (-) or the operating potential (+) ( See fig. 1). It would have been obvious to

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one of ordinary skill in the art at the time the invention was made to implement the circuit of Nilssen by arranging the first filter includes a first coil (L1) coupled to the output of the first half bridge and the resonant circuit includes a second coil coupled to the output of the second half bridge characterized by a first capacitor coupled between the first coil and either the reference potential (-) or the operating potential (+) and second capacitor coupled between the second coil and either the reference potential (-) or the operating potential (+) in order to restores a substantially pure sinusoidal output voltage waveform to the output of a converter, regardless of the load current level or power level for the stated purpose has been well know in the art as evidenced by teaching of Jungreis et al. (See column 1, line 40-43).

With respect to claim 10, Jungreis et al. discloses with the same structure as claim invention so the system will provide the same function as invention.

With respect to claim 11, Jungreis et al. discloses the claimed invention except for voltageless switching. It would have been obvious to one having ordinary skill in the art at the time the invention was made to different kind of switching, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

4. Claims 2-4 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nilssen (U.S. pat. 4,949,015) in view of Jungreis et al. ( U.S. Patent No. 6,535,403) as applied to claim 1, in view of Haas et al. (U.S. Patent No. 5,712,536).

With respect to claims 2-4, Nilssen and Jungreis et al. disclose all of the claimed as expressly recited in claim 1, except for the third capacitor being connected between the output of the half bridge and either operating potential (+) or reference potential (-) and in that a fourth capacitor is connected between the operating potential (+) and the output of the first half bridge, Haas et al. discloses the third capacitor  $C_{s2}$  and fourth capacitor  $C_{s1}$  is connected between the output of the half bridge  $S_1, S_2$  and either operating potential (+) or reference potential (-) (See fig. 3). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Jungreis et al. and Nilssen to have the third capacitor as taught by Haas et al. The motivation for doing so would have been to provide third capacitor and fourth capacitor is connected between the output of the half bridge and either operating potential (+) or reference potential (-) in order to have constitutes the voltage on boost third capacitor.

5. Claims 5 and 7 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nilssen (U.S. pat. 4,949,015) in view of Jungreis et al. ( U.S. Patent No. 6,535,403) as applied to claim 1, in view of Pogadaev et al. (U.S. Patent No. 6,369,526).

With respect to claim 5, Nilssen and Jungreis et al. disclose all limitation of invention except for the current sensor and comparator device. However, Pagadaev et al. disclose current sensor 8 and comparator device 6. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Nilssen and Jungreis et al. by arranging the current sensor for generating a current sensor signal which represents the value of the current through the first coil and

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comparator device as taught by Haas et al. in order to effectively control the current supplied to the load or lamp.

With respect to claim 7, Pogadaev et al. disclose a delay device (See column 2, line 47-50).

6. Claim 6 rejected under 35 U.S.C. 103 (a) as being unpatentable over Nilssen (U.S. pat. 4,949,015) in view of Jungreis et al. ( U.S. Patent No. 6,535,403), and further in view of Pogadaev et al. (U.S. Patent No. 6,369,526), as applied to claim 5, in view of Black, Jr. et al., U.S. Patent No. 5,831,426.

With respect to claim 6, Nilssen, Jungreis et al. and Pogadaev et al discloses all of the claimed limitations as expressly recited in claim 5 except for a magnetoresistive sensor. However, Black, Jr. et al discloses the magnetoresistive sensor as current sensor (See column 2, line 32). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Nilssen, Jungreis et al. and Pogadaev et al. to have current sensor as magnetoresistive sensor as taught by Black, Jr. et al. in order to provide more accurate representations of the input currents. Further more, It would have been obvious to one having ordinary skill in the art at the time the invention was made to different kind of current sensor, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571 272 1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

H.V  
February 8, 2006.



**TUYET VO**  
**PRIMARY EXAMINER**